ABSTRACT

This invention provides a novel phosphor material that has better brightness than conventional phosphors using dispersed rare earth ions, and that possesses excellent light resistance, temporal stability, and the like, and a light-emitting device with high brightness comprising such phosphor material and an excitation ultraviolet light source corresponding to the properties thereof. A phosphor comprising a silicon-containing solid matrix and semiconductor superfine particles dispersed therein at a concentration of 5×10^{-4} to 1×10^{-2} mol/L, said semiconductor superfine particles having a fluorescence quantum yield of 3% or greater and a diameter of 1.5 to 5 nm, and a light-emitting device including said phosphor and a light source for excitation light with an intensity of 3 to 800 W/cm^2.